IN THE SPECIFICATION:

Please amend paragraph **[0003]** as follows:

[0003] State of the Art: As illustrated in ~~FIGS. 1a~~ FIGS. 1A and 1B, a conventional rocket motor 2 comprises a case 4 or shell produced from a rigid, durable material, such as a metal or composite. The case houses a solid propellant grain 6 that combusts to provide the thrust necessary to propel the rocket motor 2. An insulation layer 8 is deposited between the case 4 of the rocket motor 2 and the propellant grain 6 to protect the case 4 from heat and particle streams that are generated during operation of the motor. The insulation layer 8 is comprised of an insulation material that is capable of withstanding high temperatures (approximately 2760°C or 5000°F) and high interior pressures (approximately 1500 psi) that are produced upon combustion of the propellant grain 6. If the insulation material is not capable of withstanding these temperatures and pressures, the heat and particle streams erode the insulation layer 8, leaving the case 4 susceptible to melting or degradation, which may ultimately lead to failure of the rocket motor 2.

Please amend paragraph **[0004]** as follows:

[0004] Rocket motor insulation materials have typically used filled and unfilled rubbers and plastics, such as phenolic resins, epoxy resins, high-temperature melamine-formaldehyde coatings, and polyester resins. In addition, elastomers have been used due to their desirable mechanical, thermal, and ablative properties. For example, ethylene propylene diene monomer ("EPDM") rubbers, also known as EPDM polymers, have been commonly used in insulation materials. However, some elastomers have poor thermal properties and poor mechanical properties, such as elongation capabilities and tensile strength. Therefore, an EPDM polymer is commonly combined with flame-retardants and fillers to improve these properties. The ~~flame-retardants~~ flame-retardants are inorganic or organic compounds. The fillers are typically organic-based or carbon fibers and are used to reinforce the elastomers and to prevent or slow down the decomposition of the insulation material.

Please amend paragraph **[0009]** as follows:

[0009] In WO 01/04198 to Harvey *et al.*, a rocket motor insulation that comprises an elastomer-based polymer, such as NORDEL® IP 4640, and hydrophilic silica particles coated with a hydrophobic coating is disclosed. The insulation also comprises an organic ~~flame-retardant,~~ flame-retardant, such as DECHLORANE®, in combination with antimony oxide or hydrated alumina.

Please amend paragraph **[0035]** as follows:

[0035] The insulation material may be deposited or applied between the case 4 and the propellant grain 6. Specifically, the insulation material may be deposited or applied on an inner surface of the case 4 of the rocket motor 2, as shown in FIGS. 1A and 1B. Preferably, the insulation material is applied in an uncured form and then cured to form the insulation layer 8. For example, uncured insulation material may be applied to the inside of a formed rocket motor and then cured. In addition, the uncured insulation material may be applied to a mandrel, cured to form the insulation layer 8, and subsequent layers of the rocket motor formed over the insulation layer 8. The insulation material may be cured in a press at approximately 300±10°F for approximately two hours at approximately 100±10 psi. The insulation material may also be cured in an autoclave at approximately 300±10°F at a pressure of approximately 45 psi. The time required to cure the insulation material may depend on the thickness of the insulation material.

Please amend paragraph **[0047]** as follows:

[0047] ~~RLD5840~~ RDL5840 was prepared by an internal mixer using a ~~convention~~ conventional mixing technique.